

Notice of Allowability

Application No.

10/791,323

Examiner

Luis Roman

Applicant(s)

FITZGERALD ET AL.

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 08/14/07.
2. ☒ The allowed claim(s) is/are 1,4,7-12 and 15-22.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Reasons for Allowance

Examiner acknowledges a submission of the amendment filled on 0814/07. Accordingly claims 8-11, 16-17 & 19-21 have been kept original, claims 12 & 18 have been amended, claims 7, 15 & 22 have been previously presented and no new claims were added. It also included remarks/arguments.

The following is an examiner's statement of reasons for allowance.

Claims 1, 12 & 18: the closest references are: "Relay Contact Protective Circuit", Hongel US Patent 4959746, issued on September 25, 1990, "Passive Bipolar Arc Control System And Method", Sellers US Patent 6863789, issued on March 08, 2005 & "Electronic Speed Control System For A Fluid Operated Disc Clutch", E. D. Long, issued on April 08 1969.

These patents disclose:

- Hongel discloses a device for preventing arcing between contacts (Fig. 4 element 10B) of a switching device as the contacts of the switching device are opened, the switching device including a coil (Fig. 4 element 10A) for controlling the opening of the contacts, the device comprising: a coil suppression circuit (Fig. 4 elements 242, 244) connected in parallel with the coil, the coil suppression circuit dissipating the energy stored in the coil in response to the de-energizing of the coil (Col. 12 lines 38-41); a driver (Fig. 4 elements 250-300, 250-302) having an input operatively connected to the anode of the Zener diode (Fig. 4 elements 250-300, 250-302 <paths: anode of 242, 262, 282, base of 266 & 242, 262, 284, base of 274>) and an output (Fig. 4 elements 300<Q> & 302<Q>); and a first solid state switch having a gate operatively connected to the output of the driver (Fig. 4 element 26left<G> connected to 300<Q> & 302<Q>) and being connected in parallel with the contacts (Fig. 4 elements 26left, 10B), the first solid state

switch movable between an open position preventing the flow of current there through and a closed position (Col. 4 lines 63-68 & Col. 5 lines 1-3); wherein the driver closes the first solid state switch in response to a reference voltage across the first Zener diode (Col. 11 lines 44-63).

This reference discloses preventing arcing in both situations when the coil is energizing and deenergizing, since the arcing is present when the contacts are in close proximity whether they are opening or closing.

- Sellers teaches having a first and a second Zener diodes connected in series (Fig. 3A element 44).
- E. D. Long teaches a reference voltage that is obtained at a node between two Zener diodes, signal that is connected to a switch (Fig. 5 elements 92, 94, Q1 & Col. 4 lines 19-39).

The references do not disclose:

- the first Zener diode providing a reference voltage generated by the de-energization of the coil.
Required by claims 1, 12 & 18.
- current flow to the driver is prevented in response to energization of the coil.
Required by claim 1.
- the voltage reference device prevents current flow to the actuation circuit in response to energization of the coil.
Required by claim 12.
- The energy dissipation prevents current flow to the driver in response to energization of the coil.

As a result for claims 1, 4, 7-12 & 15-22 the allowability resides, at least in part, in the above-described limitations, in combination with the other elements of each of the claims, which has not been disclosed in or rendered obvious by the Prior Art.

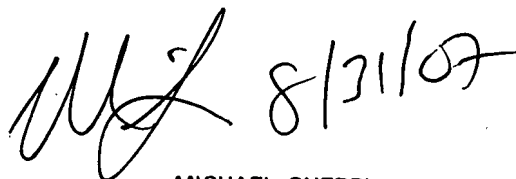
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luis E. Román whose telephone number is (571) 272 – 5527. The examiner can normally be reached on Mon – Fri from 7:15 AM to 3:45 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from Patent Application Information Retrieval (PAIR) system. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LR/082807

Luis E. Román
Patent Examiner
Art Unit 2836



MICHAEL SHERRY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800